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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,895	08/26/2003	John Blumenthal	4605-001	3576
22429	7590	11/24/2004		
LOWE HAUPTMAN GILMAN AND BERNER, LLP			EXAMINER	
1700 DIAGONAL ROAD			WRIGHT, ANDREW D	
SUITE 300 /310			ART UNIT	PAPER NUMBER
ALEXANDRIA, VA 22314			3617	

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/647,895	BLUMENTHAL ET AL.
	Examiner	Art Unit
	Andrew Wright	3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 30 August 2004.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-34 is/are pending in the application.  
 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 15-17,20-29 and 31-34 is/are rejected.  
 7) Claim(s) 18,19 and 30 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 26 August 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1/8/04</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Election/Restrictions***

1. Applicant's election with traverse of claims 15-34 in the reply filed on 8/30/04 is acknowledged. The traversal is on the ground(s) that the inventions are not distinct. This is not found persuasive because it was shown in the previous Office Action that the process as claimed can be practiced by another materially different apparatus. The inventions are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the method claims are not recited as having a watercraft. The method claims could be performed by a different apparatus, such as a float or a crane that suspends the sheath in the water.
2. The requirement is still deemed proper and is therefore made FINAL.
3. Claims 1-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8/30/04.

### ***Information Disclosure Statement***

4. The information disclosure statement filed 1/8/04 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each

publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but some of the information referred to therein has not been considered. Specifically, no copy of the "Ice Eater" and "The Powerhouse" publications was received. Those references have not been considered.

***Drawings***

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the drive shaft being generally horizontally disposed (claim 29) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of

the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

6. Claims 15, 22, 24-26, 28, and 32-34 are objected to. Claim 15 recites "the craft" when referring to the water craft. Consistent terminology should be used throughout the claims. Claims have similar recitations and are objected to for the same reason.

Appropriate correction is required.

7. Claim 17 is objected to. Claim 17 recites "the water pumping apparatus" when referring to the water pumping arrangement. Consistent terminology should be used throughout the claims. Appropriate correction is required.

8. Claim 19 is objected to. Claim 19 recites "the outlets" when referring to the another openings. Consistent terminology should be used throughout the claims. Appropriate correction is required.

9. Claim 20 is objected to. Claim 20 recites "the outlets" when referring to the another openings. Consistent terminology should be used throughout the claims. Furthermore, claim 20 recites plural outlets while claim 15 only recited a single another opening. Appropriate correction is required.

10. Claim 21 is objected to. Claim 21 recites "the inlet" when referring to the opening. Consistent terminology should be used throughout the claims. Appropriate correction is required.

11. Claim 23 is objected to. Claim 23 recites "the structure" when referring to the first structure. Consistent terminology should be used throughout the claims. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 26 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

14. Claim 26 recites "the second structure is pivotable relative to the longitudinal axis of the craft between the first and second structure." It is unclear how the second structure is pivotable between itself.

15. Claim 33 recites the limitation "the structure" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 33 recites the limitation "the first and second structures" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 15, 16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Springston (US 4,247,261). Springston shows a water pumping arrangement (20) comprising a sheath (22) and propeller (28). The sheath has an inlet (26) at the bottom of the sheath and an outlet (24) at the top of the sheath. The propeller draws water into the inlet and pushes it out of the outlet. The outlet is positioned below the surface of the body of water (fig 1). Holes (50) add to the effective inlet area, such that through conservation of mass and momentum the outlet (24) water velocity is necessarily higher than the inlet (26) water velocity. The turbulent flow and acceleration due to the nozzle effect is capable of causing air bubbles to be induced in the water above the outlet. Springston teaches that the sheath can be suspended from a boat.

18. It is noted that claim 15 recites an intended use: "arranged for causing..." in lines 4-13. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

19. Regarding claim 16, the propeller axis can be vertical (column 3, lines 1-4).

20. Regarding claim 34, Springston shows a vertically extending flexible connector (34) between that holds the sheath. Springston teaches that the sheath can be suspended from a boat. So the connector is necessarily between the boat and sheath.

***Claim Rejections - 35 USC § 103***

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 15, 17, 20, 21, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Springston (US 4,247,261). Springston discloses the elements of claim 15. Regarding claim 17, Springston does not disclose a plurality of sheaths and propellers. However, it is within the range of knowledge of the skilled artisan to use more than one sheath and propeller. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a plurality of the pumping arrangements (20) shown by Springston. The motivation would be to de-ice a larger area of the water surface.

23. Regarding claim 20, Springston teaches that the device, in its operation, is suspended at a desired depth, e.g. 3 or 4 feet below the water surface. This teaching is not limiting and does not exclude shallower depths. It would be within the range of knowledge of the skilled artisan to suspend the outlet at any desired depth below the surface. Furthermore, in the transient state of lowering the pumping arrangement (20)

from the surface to the desired depth, the outlet will necessarily pass through the 4 to 6 inch depth. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to position the outlet about 4 to 6 inches below the surface, at least temporarily, for the purpose of lowering the pumping arrangement from the surface to the desired depth.

24. Similarly for claim 21, in lowering the pumping arrangement from the surface to the desired depth, the inlet will pass through a depth of 24 to 30 inches. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to position the inlet about 24 to 30 inches below the surface, at least temporarily, for the purpose of lowering the pumping arrangement from the surface to the desired depth.

25. Regarding claim 31, Springston teaches that the pumping arrangement can be suspended from a boat but does not specify what type of boat. Springston further teaches that the pumping arrangement is useful in marinas and navigable waterways. The catamaran is a common and well known type of boat that is found in both marinas and navigable waterways. It would be obvious for a catamaran owner to use the Springston arrangement for the purpose of keeping ice off of his boat. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the pumping arrangement with a catamaran. The motivation would be to de-ice the water around the catamaran.

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26. Claims 15, 22, 23, 25, 27-29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Springston (US 4,247,261) in view of Abendroth (US 3,717,115). Springston discloses the elements of claim 15. Springston does not disclose the structures on the boat. Abendroth shows an ice-cutting boat. The Abendroth boat cuts an ice-channel in a navigable waterway while moving through the waterway. Abendroth is silent as to de-icing when the boat is not moving. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the Springston pumping arrangement with Abendroth boat for times when the Abendroth boat is not moving, such as when it is docked. The motivation would be to prevent the formation of ice around the boat. Abendroth shows multiple structures on the boat. First structure is member (26), which is capable of carrying a plurality of sheaths on opposite sides of and outboard of the boat. Member (26) includes a boom. Second structure (40) is capable of carrying at least one sheath forward of the bow. Third structure (22) is capable of carrying a sheath between the first and second structures and along a longitudinal center axis of the boat. The first, second, and third structures are capable of carrying sheaths as recited in claim 29.

27. Again, it is noted that claims 22, 23, 25, 27-29, and 32 contain intended use recitations (e.g. "for carrying...", "arranged for carrying...", etc.). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the

intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

28. Claims 15 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Springston (US 4,247,261) in view of Stampe (US 4,723,498). Springston discloses the elements of claim 15. Springston does not disclose the structure on the boat. Stampe shows a sailboat. Springston teaches that the pumping arrangement can be suspended from a boat but does not specify what type of boat. Springston further teaches that the pumping arrangement is useful in marinas and navigable waterways. The sailboat is a common and well known type of boat that is found in both marinas and navigable waterways. It would be obvious for a sailboat owner to use the Springston arrangement for the purpose of keeping ice off of his boat. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the pumping arrangement with a catamaran. The motivation would be to de-ice the water around the sailboat. The Stampe boat has a first structure including boom arrangement including booms (12, 12'). The booms are capable of carrying a plurality of sheaths on opposite sides of and outboard of the boat. The booms are pivotable relative to the long axis of the boat such that the booms are parallel to the long axis as shown in fig 6. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is

capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

### ***Allowable Subject Matter***

29. Claims 18, 19, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Moll et al. ('541) shows a boat that carries a boom and an aeration system. Webb ('367) shows a boat with multiple sheaths, each sheath having an inlet and an outlet, each inlet sucking water in and each outlet discharging the sucked in water below the surface. Liscio ('060) shows a water circulation device comprising a sheath and a propeller that is suspended below the water line at an angle. Blum ('064) shows a boat with an aeration apparatus. Wells ('987) shows a catamaran-type boat with plural sheaths and propellers. Gross et al. ('091) shows a catamaran-type boat with an aeration apparatus.

31. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax number for official communications is 703-872-9306. The fax number directly to the examiner for unofficial communications is 703-746-3548.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew D. Wright  
Patent Examiner  
Art Unit 3617

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11/14/04  
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